

## **REMARKS**

Claims 1-5 are pending in the application. In the Final Office action dated May 17, 2007, claims 1-5 were rejected. Applicants have amended the specification. In view of the following remarks, Applicants respectfully request reconsideration of the rejected claims and allowance of the application.

### ***Amendments to the Specification***

Applicants take this opportunity to correct two typographical errors in the formula for the property of retaining a fixed shape set out at page 18, line 9.

The first error was the replacement of 1 (one) in the formula by  $l$  (ell). This typographical error occurred during translation of the instant application from Japanese to English. The error is an obvious one, as  $(l_3 - l_2) / (l_2)$  is a nondimensional value. The length  $l$  is a dimensional value. The subtraction of a nondimensional value from length  $l$  would not result in a nondimensional quantity.

The second error is in the value " $(l_3 - l_2) / (l_2)$ ", which should be  $-(l_3 - l_2) / (l_3)$ . Applicants suggest this error is also an obvious error. The formula for calculating the property of retaining a fixed shape can be restated as 100 minus a "restoring rate", where the restoring rate would be well-known to one of skill in the art, and is defined as  $\{(l_3 - l_2) / (l_3)\} \times 100$ . Furthermore, if the denominator were truly  $l_2$ ,  $R$  would be equal to  $(2 - l_3/l_2) \times 100$ , which would permit  $R$  to be a negative value. As  $R$  is clearly not permitted to be negative, the formula is incorrect.

An amendment to correct an obvious error does not constitute new matter where one skilled in the art would not only recognize the existence of error in the specification,

but also the appropriate correction (MPEP § 2163.07(II)). Applicants respectfully request the amendments to the specification be entered.

***Rejections under 35 U.S.C. § 112***

Claims 1-5 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that the Applicants regard as their invention. Applicants traverse the rejection.

Where a claim defines and describes the claimed subject matter with a reasonable degree of clarity and particularity, the claim should not be considered indefinite. The question of whether a given claim satisfies this requirement should be considered in light of

- (A) The content of the particular application disclosure;
- (B) The teachings of the prior art; and
- (C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made (see MPEP § 2173.02).

Applicants have provided sufficient guidance in the specification that an artisan of ordinary skill would be well apprised of the nature of the claimed subject matter. A range of permitted dimensions of the claimed twist ties are provided in claim 1, as is a description of the nature of the core part and wing part of the tie. The tie is constituted of non-halogenous material. Applicants suggest that these aspects of the claimed subject matter are defined distinctly and with particularity.

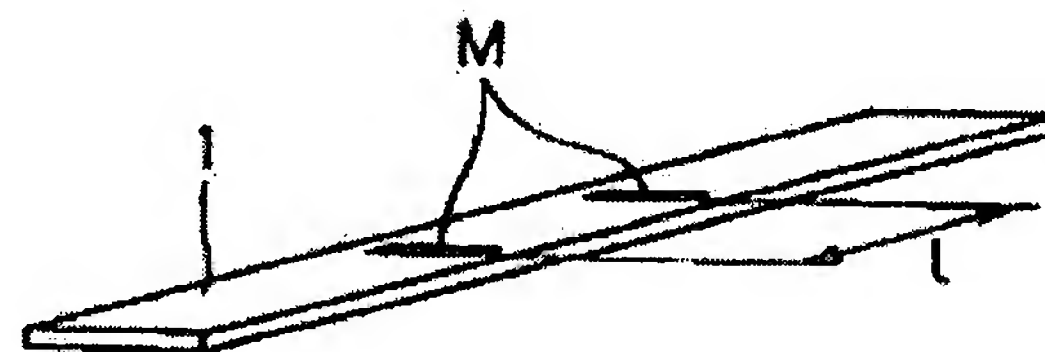
Additionally, Applicants have recited in claim 1 that the twist ties of claim 1 exhibit a property of retaining a fixed shape of 95% or less. The Examiner suggests that it is unclear how the twist tie will not retain a fixed shape having a 95 percent or less retention as claimed, as the tie is constantly moving. Furthermore, the Examiner asserts that the claim fails to provide any details on how the percentage is determined, with respect to what position it is being determined, and details of the timeframe used to determine the retention. Applicants disagree, and suggest that the Examiner consider the guidance of the specification in interpreting the claim.

In particular, at pages 18 and 19 of the specification, in combination with Fig. 7, specific and detailed guidance is provided as to how the property of retaining a fixed shape is measured. As recited at page 19 and shown in Fig. 7:

"As shown in Fig. 7, (1) a twist tie 1 collected from a wound form in a bundle is cut in a length of 80 mm precisely to prepare a sample and marked lines M having a predetermined distance 1 between the lines are formed at the central position of the sample (Fig. 7a) ,

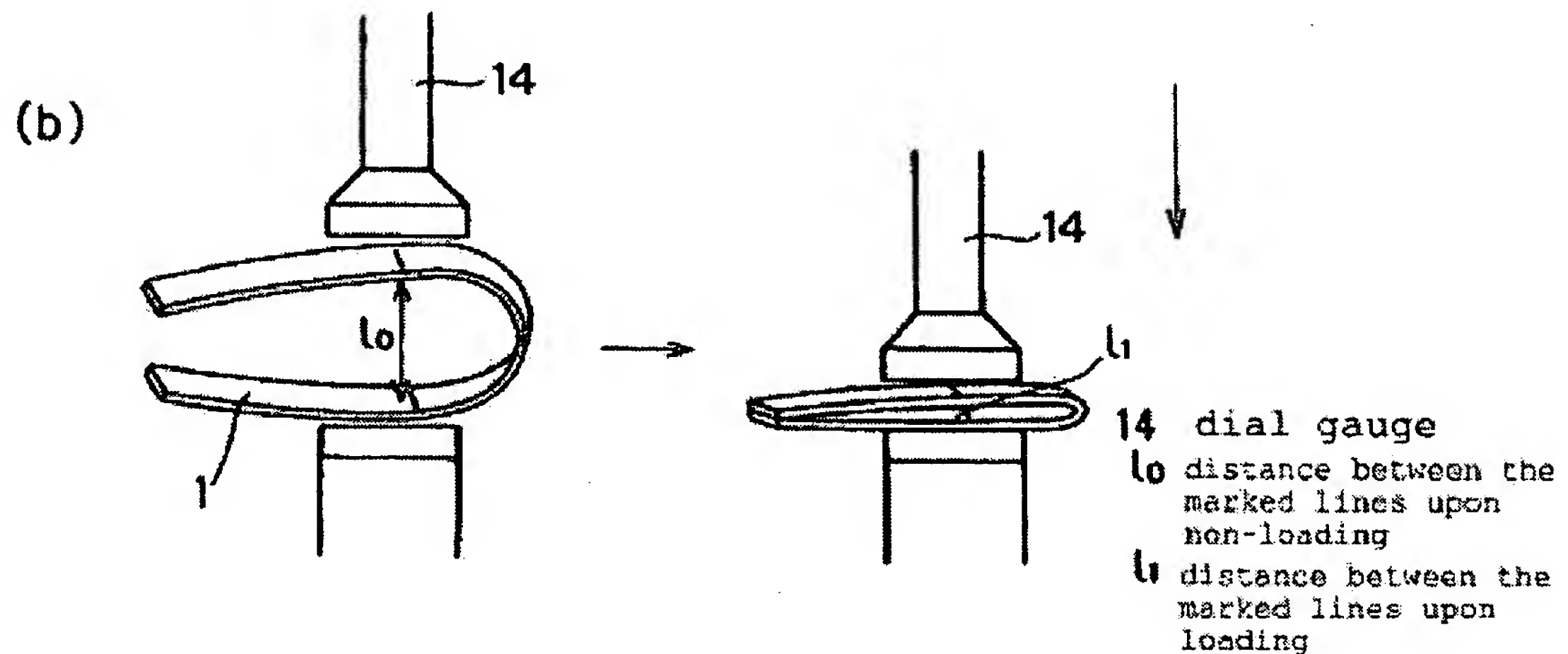
Fig. 7

(a)

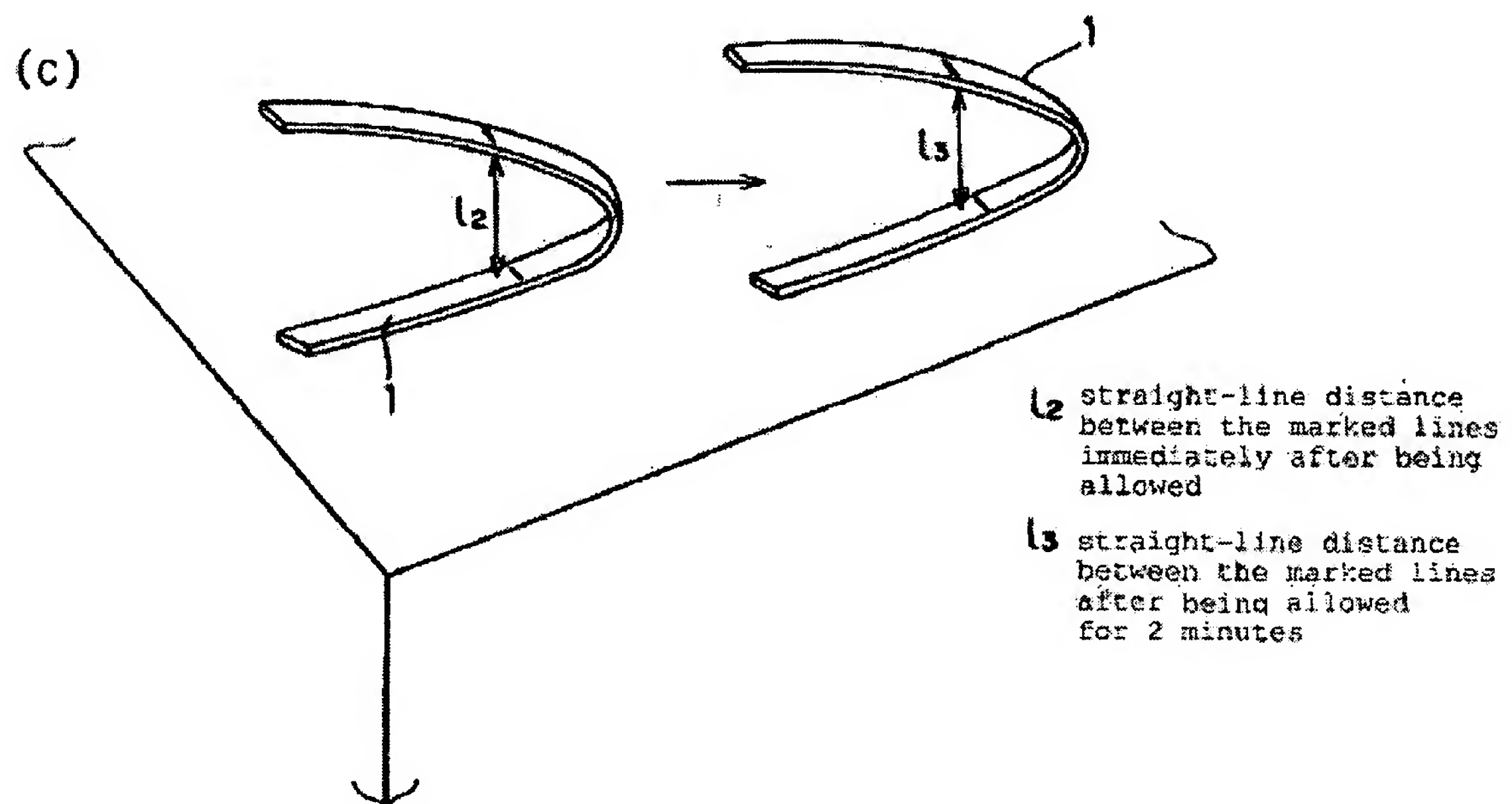


1 twist tie  
M marked lines  
l distance between the marked lines

(2) the sample is mildly bent so as to align the ends, the site of the marked lines M is sandwiched with a dial gauge 14 having a measuring load of 80 g as stipulated by JIS Z 0237 (JIS B 7503) , a straight-line distance between the marked lines upon non-loading (1a) and a straight-line distance between the marked lines upon loading (11) are read from the graduation of the dial gauge 14 and a property of forming a fixed shape is determined from the aforementioned formula (Fig. 7b)



and then (3) the dial gauge 14 is removed, the straight-line distance between the marked lines immediately after being allowed (12) is measured by a carpenter's square followed by measuring the straight-line distance between the marked lines after 2 minutes (13) and a property of retaining the fixed shape is measured by the aforementioned formula (Fig. 7c) ."



As indicated at page 18, line 9 (and as amended by this paper), the formula for determining the property of retaining a fixed shape is:

$$R(\%) = \{1 - (l_3 - l_2)/l_3\} \times 100$$

where  $l_2$  and  $l_3$  are determined by the procedure described above, and as depicted in Fig. 7.

Addressing the Examiner's concerns, first that there are no details on how the property of retaining a fixed shape, or R, is calculated, Applicants have shown that the formula for determining R, as well as the precise procedure for measuring the values used to determine R, are clearly provided by the specification. The instructions include guidance as to the position used to determine R, and the timeframe within which to determine R.

Applicants respectfully suggest that in view of the content of the disclosure, an artisan of ordinary skill would be well-able to understand the metes and bounds of claim 1. Therefore, Applicants respectfully request the withdrawal of the rejection of claims 1-5 under 35 U.S.C. § 112, second paragraph.

### ***Rejections under 35 U.S.C. § 102***

#### **All Claim Limitations Must Be Considered**

The Examiner has indicated that the recitation in claim 1 that the claimed twist ties have "a property of retaining a fixed shape of 95% or less" has not been considered in evaluating the patentability of the claims. Applicants suggest that this is improper.

It is axiomatic that all words in a claim must be considered in judging the patentability of a claim against the prior art (see MPEP § 2173.06). A claim limitation which is considered indefinite cannot be disregarded (MPEP § 21043.03). The

Examiner's refusal to consider every element of the Applicants' claimed invention when evaluating the patentability of the claims is inappropriate. Furthermore, as discussed above, Applicants have demonstrated that the claim element in contention is fully supported and defined in the specification. Applicants have therefore responded to the prior art rejections by distinguishing *the claimed invention* over the cited references.

Claim 1 is rejected under 35 U.S.C. § 102(b) as being anticipated by Kincel et al. (U.S. Patent no. 6,372,068). Claim 1 is rejected under 35 U.S.C. § 102(e) as being anticipated by Contreras et al. (U.S. Patent no. 7,011,879).

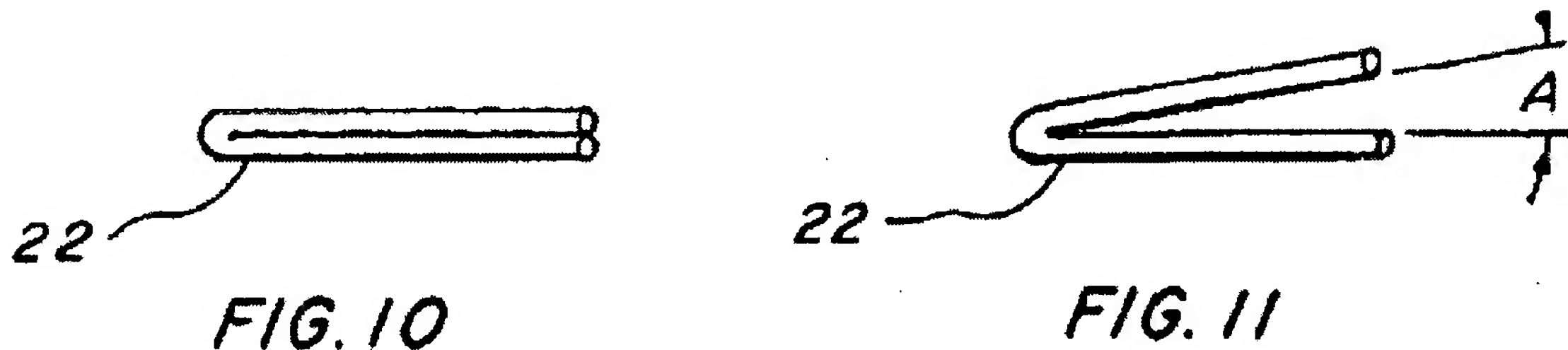
The Examiner suggests that Kincel et al., or in the alternative Contreras et al., discloses a twist having all the characteristics of the twist tie of claim 1. Applicants respectfully disagree. Neither Kincel et al. nor Contreras et al. disclose the measurement of the property of retaining a fixed shape, as recited in claim 1 and as defined in the specification. Furthermore, neither Kincel et al. nor Contreras et al. disclose the selection of a twist tie having a property of retaining a fixed shape of 95% or less. The subject matter of claim 1 is therefore novel with respect to the cited references.

Furthermore, the twist ties of claim 1 would not be rendered obvious by the disclosures of Kincel et al. and Contreras et al., as the cited references teach that a *maximal* retention of an applied fold is most desirable.

As discussed in their previous Response, both Kincel et al. and Contreras et al. stress the importance of the disclosed twist ties maintaining a formed twist. The ability of a twist tie to meet these criteria is measured using the so-called "dead fold test," where the tie is folded 180 degrees, and then permitted to relax for three minutes (as



discussed by Kincel et al. at col. 6, lines 22-33), and depicted schematically in Figs. 10 and 11 of Contreras et al., reproduced below.



According to Kincel et al., and Contreras et al., an acceptable tie is one that exhibits a dead fold angle of no greater than 10 degrees, and retains this 10 degree angle even when permitted to relax for a minimum of three minutes. The preferred twist of the cited references would therefore have a property of retaining a fixed shape of 100%. In contrast, the twist ties of claim 1 *must* relax sufficiently within *two* minutes to demonstrate retention of a fixed shape of no more than 95%.

There can be no suggestion or motivation to modify the teachings of Kincel et al. and Contreras et al. so as to arrive at the claimed twist ties, since the teaching of the cited references emphasizes the selection of materials and configurations that *maximally* retain a fold. For example "it has been found that other configurations and combinations of shape are even more prone to retain their twist" (col. 6, lines 60-61).

Furthermore, neither Kincel et al. nor Contreras et al. disclose the advantages of a twist tie having a retention of fixed shape of less than 95%. In their specification, Applicants describe that a desirable twist tie is one that neither retains a fixed shape permanently, nor relaxes too extensively, particularly where the twist tie is wound on a reel for use in a binding machine, as discussed at page 8, paragraph 2 to page 9,

paragraph 5. More particularly, as stated at page 13, paragraph 4, "when the property of retaining a fixed shape was less than 70%, there were many cases where disjoining of the tie 1 from the reel 2a was induced while, when it was more than 95%, the recovering force is poor whereby frequency of slipping down into the gap and tangling and twining of the lines was much" (emphasis added).

In order to anticipate a claim, a single reference must disclose each and every element of the claim, as it is set forth in the claim. Neither Kincel et al. nor Contreras et al. discloses each element of claim 1. Applicants therefore suggest that claim 1 is not anticipated by the cited references, and request that the rejections of claim 1 under 35 U.S.C. § 102 be withdrawn.

### ***Rejections under 35 U.S.C. § 103***

Claims 2-5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kincel et al.

The Examiner suggests that it would have been obvious to one having ordinary skill in the art at the time the invention was made to form a twist tie according to claims 2-5, since the twist tie meets all the structural limitations and is made from the same materials being claimed. Applicants respectfully disagree.

As discussed above, Kincel et al. fails to disclose a twist tie having a property of retaining a fixed shape of 95% or less, as defined in the specification. The reference therefore fails to disclose each and every element of the rejected claim, as required to establish *prima facie* obviousness (see MPEP § 2143.03).



Further, as admitted by the Examiner at page 5, lines 10-11, "the main objective of Kincel is to obtain a twist tie resisting untwisting", while the instant claims specifically exclude those twist ties that demonstrate maximal resistance to untwisting. Where the proposed modification would change the principle of operation of a cited reference, there can be no suggestion or motivation to modify the reference as indicated by the Examiner, also as required to establish *prima facie* obviousness (see MPEP § 2143.01(VI)).

As the Kincel et al. reference fails to establish the *prima facie* obviousness of claims 2-5, Applicants respectfully request the withdrawal of the rejection of claims 2-5 under 35 U.S.C. § 103.

#### ***Examiner's Response to Previous Arguments***

Responsive to Applicants' previous amendment dated March 2, 2007, the Examiner has indicated that the argument that Kincel and Contrares fail to disclose "a property of retaining a fixed shape of 95 percent or less" fails to persuade because the limitation is considered indefinite, and is therefore not being considered.

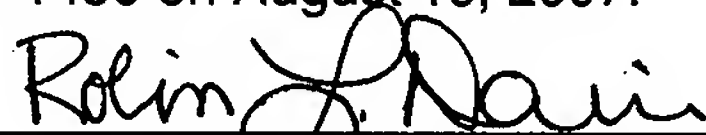
Applicants suggest this is an improper standard for performing an examination of the claims on their merits, and draw the attention of the Examiner to MPEP § 2143.03, which specifically states that a claim limitation which is considered indefinite cannot be disregarded.

Applicants believe that this application is now in condition for allowance. Accordingly, Applicants respectfully request that the Examiner issue a Notice of Allowability covering the pending claims. If the Examiner has any questions, or if a

telephone interview would in any way advance prosecution of the application, please contact the undersigned agent of record.

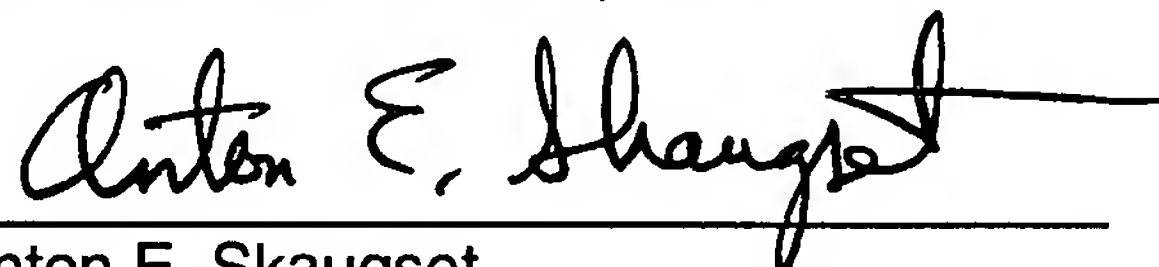
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